Applicant: Howard J. Federoff et al.

Attorney's Docket No.: 12610-020US1 / 6-11479-1275

Serial No.: To Be Assigned

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## Amendments to the Specification:

Please insert the following paragraph after the title:

Cross-Reference to Related Applications

This application is the National Stage of International Application No. PCT/US2004/037511, filed on November 8, 2004, which claims the benefit of United States Applications No. 60/518,474, filed on November 7, 2003. The contents of both of the foregoing applications are hereby incorporated by reference in their entireties.

Please amend the paragraph beginning at page 17, line 11, as follows:

More specifically, the compositions can include  $A\beta_{1-40}$ ,  $A\beta_{1-42}$ ,  $A\beta_{1-43}$ , HSVA $\beta$ , and HSVA $\beta$ /TtxFC. The  $A\beta$  proteins can have a sequence found in nature, including wild-type, Dutch, and Iowa mutations. For example, the  $A\beta_{1-42}$  protein can have the sequence (from the N-to the C-terminus): Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-Ile-Ala (SEQ ID NO:[[26]]1). The sequences of  $A\beta$  proteins are known in the art (as are the sequences of the proteinaceous adjuvants and immunomodulatory proteins described herein). The nucleic acid molecules encoding the proteins described herein (*i.e.*, the  $A\beta$  proteins, proteinaceous adjuvants, and immunomodulatory proteins) can be naturally occurring or may be degenerate variants.

Please amend the paragraph beginning at page 34, line 9, as follows:

The previously described HSVlac amplicon contains the coding sequence for *E. coli* β-galactosidase under the transcriptional control of the HSV immediate-early 4/5 gene promoter (Geller and Breakefield, *Science* 241:1667-9, 1988). The 126-bp sequence encoding Aβ1-42 was PCR-amplified using sequence-specific primers that contained Bam HI and Hind III restriction sites and cloned into the HSVPrPUC amplicon vector (Geller and Breakefield, *Science* 241:1667-9, 1988) to create HSVAβ. The Aβ1-42 sense primer was 5'-

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CCCGAAGCTTACCATGGATGCAGAATTCCGACATGACTCAGG-3' (SEQ ID NO:1) and the Aβ1-42 sense primer was 5'-CCCGAAGCTTACCATGGATGCAGAATTCCGACATGACT-CAGG-3' (SEQ ID NO:2). HSVAβ/TtxFC was constructed by PCR amplifying the 1356-bp tetanus toxin fragment C segment (TtxFC) using gene-specific primers that contained *Bam*HI and *Sac*I restriction sites and the resultant product was cloned into the HSVAβ vaccine vector. The TtxFC sense primer was 5'-GCGGGATCCAAAAATCTGGATTGTTGGGTTGATAAT-3' (SEQ ID NO:3) and the TtxFC antisense primer was 5'-CGACTGAGCTCTTAATCA-TTTGTCCATCCTTCATCTGT-3' (SEQ ID NO:4). The newly designed vectors were sequenced to confirm identity, and in the case of HSVAβ/TtxFC, to ensure the maintenance of translational reading frame between Aβ1-42 and TtxFC coding sequences. Amplicon stocks were prepared using a modified helper virus-free packaging method that has been described previously (Bowers *et al.*, *Gene. Ther.* 8:111-120, 2001). Vector titers were determined using expression- and transduction-based methodologies (Bowers *et al.*, *Mol. Ther.* 1(3):294-299, 2000).